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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,574	10/24/2003	Charles E. Slone	Slone.C-04	9067
22197	7590	10/17/2005		
GENE SCOTT; PATENT LAW & VENTURE GROUP 3140 RED HILL AVENUE SUITE 150 COSTA MESA, CA 92626-3440				
			EXAMINER WERNER, JONATHAN S	
			ART UNIT 3732	PAPER NUMBER

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/692,574

Applicant(s)

SLONE, CHARLES E.

Examiner

Jonathan Werner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/24/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/19/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 2/19/04 was filed before the mailing date of the first Office Action on the merits. The submission of all US patent documents is in compliance with the provisions of 37 CFR 1.97 and therefore said documents are being considered by the examiner. However, the information disclosure statement fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Furthermore, it is unclear if Publication No. WO 01/30259 was meant for consideration since it was placed in the Remarks section of the IDS and not in the Foreign Document section. As a result, the information referred to therein has not been considered.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: marginal ridge (15). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be

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labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. **The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided.** The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. **Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading.** If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.

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- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

5. The use of the trademark BiTine has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claim 3 is rejected under 35 U.S.C. 112, second paragraph because the trademark or trade name BiTine is used as a limitation to identify or describe a particular material or product. *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product.

7. Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, because of a lack of antecedent basis. Claim 5 recites the limitation "such" in such ductility while claim 6 recites the limitation "gripping means." There is insufficient antecedent basis for these limitations in the respective claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 4, 6-7 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Soelberg (4,259,070). In regard to claim 1, Soelberg shows a lingual retainer (9,31) providing a first engagement means, a buccal retainer (11,27) providing a second engagement means, wherein the first and second engagement means mutually engage in drawing the lingual and buccal retainers together within an interproximal space (col 2 ln 59-63), and wherein each of the lingual and buccal retainers provide a resilient and flexible wing extending laterally (col 2 ln 1-3) and

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positioned for fully covering a missing tooth sidewall (see Figure 1). In re claim 2, Soelberg discloses tensioning means (col 2 ln 21-29). In re claim 4, Soelberg discloses tensioning means that are a series of engaging counterparts (29,33) within the retainers. In re claim 6, Soelberg shows one of the gripping means comprises a protrusion extending outwardly from one of the retainers, and the other of the gripping means comprises an aperture for accepting insertion of the protrusion (see Figures 6 and 7). In re claim 7, the gripping means further comprises a series of teeth adapted in shape (See Figures 6 and 7). In re claim 11, Soelberg shows how to use a retainer for tooth restoration using a matrix wedge restorative combination comprising the steps of providing a flexible matrix strip (8), a lingual retainer (9,31), and a buccal retainer (11,27); adapting the matrix strip for fitting between a pair of adjacent teeth (col 1 ln 61-66); pressing the retainers between the teeth from their respective sides and engaging the retainers against the teeth (Figure 2); and conforming the retainers and matrix strip to the shape of the teeth by compression of the retainers (col 1 ln 60-68, col 2 ln 1-3). In re claim 12, Figure 2 shows engaging the two retainers comprises insertion of a protrusion from one retainer into an aperture of the other retainer. In re claim 13, Figures 6 and 7 show the insertion of the protrusion includes gripping a series of teeth within the aperture.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soelberg in view of McKenna (6,220,858). In re claim 3, Soelberg discloses the matrix wedge system as previously described, but lacks a BiTine ring. McKenna, however, teaches the use of a similar dental clamp ring (50) that can be used to maintain a matrix and a wedge in position (col 8 ln 17-21). Therefore, it would be obvious to one having ordinary skill in the art at the time of the invention to add a dental clamp ring in order to enhance engagement of the wedge and matrix against the teeth as taught by McKenna. In re claim 8, Soelberg discloses the matrix wedge system as previously described, but lacks a matrix strip. McKenna, however, teaches the use of a matrix strip with a marginal ridge area (see top ridge portion of Figure 1A), a contact area (16), and a gingival margin area (14a), the three areas formed in a generally concave shape (col 6 ln 53-57). Therefore, it would be obvious to one having ordinary skill in the art at the time of the invention to add a matrix strip with the three disclosed areas formed in a generally convex shape in order to conform to the contours of the interproximal area as taught by McKenna. The use of a concave shape in this instance is interchangeable with that of a convex shape because it would be obvious to one having ordinary skill in the art to use a matrix strip on a tooth the same way for either shape since the curvature of the strip is defined relative to the tooth it is applied to (see Figure 4). In re claim 9, McKenna discloses the marginal ridge area and the contact area of the matrix strip have a lesser thickness than the gingival margin area (col 6 ln

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20-25). In re claim 10, it would be obvious to one having ordinary skill in the art to recognize that when the retainers are drawn tightly together against the matrix strip they can maintain the convex shape of the strip.

10. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soelberg in view of Thompson (2,782,503). Soelberg discloses the matrix wedge system as previously described, but lacks a triangular-shaped flexible wedge.

Thompson, however, teaches the use of a triangular-shaped flexible wedge (col 2 ln 41-46) that is adapted by size for tight fitting at the marginal ridge between the corresponding adjacent teeth whereby the wedge can take the shape of the marginal ridge in the area where it is molded into since it is made of a deformable plastic material (see Figure 3). Therefore, it would be obvious to one having ordinary skill in the art at the time of the invention to add a triangular-shaped flexible wedge in order to force the matrix strip to abut the proximal wall of the tooth to provide a dam for a filling to be impacted into the cavity as taught by Thompson.

Conclusion

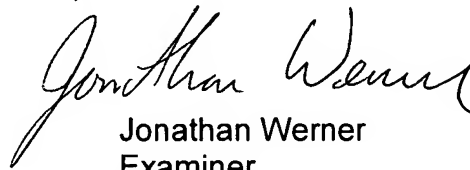
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bills (2002/0155410), Summer (6,482,005), Dragan (4,704,087), Comstock (4,373,915), Bertolletti (6,336,810), Wirt (DE 3,816,501), Meyer (5,730,592), Crowley (2,891,313), Mogelof (4,715,816), Kunkel (6,079,978), and Garrison (2002/0014006) all disclose pertinent prior art related to a matrix wedge restorative dental system.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Werner whose telephone number is (571) 272-2767. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jonathan Werner
Examiner
AU 3732

JSW
9/28/05


MELBA N. BUMGARNER
PRIMARY EXAMINER